

ABSTRACT OF THE DISCLOSURE

The present invention provides a process of producing a circularly-polarized-light-separating element, through which a circularly-polarized-light-separating element in the form of a thin film, and excellent in efficiency of reflection, can be easily and effectively produced. A cholesteric liquid crystal solution is firstly applied to a glass substrate 11 having alignment power by the use of a spinner or the like to form a film 13 (Fig. 1(a)). The film 13 of the cholesteric liquid crystal solution is then heated, thereby obtaining an uncured cholesteric liquid crystal film 14 (Fig. 1(b)). Thereafter, the uncured cholesteric liquid crystal film 14 formed on the glass substrate 11 is left as it is at room temperature for a predetermined period of time so that liquid crystalline molecules in the cholesteric liquid crystal film 14 are aligned to form a cholesteric phase with the liquid crystalline molecules in planar orientation (Fig. 1(c)). While holding the phase of the uncured cholesteric liquid crystal film 14 to a supercooled cholesteric one at room temperature, ultraviolet light is applied to this film 14 in an atmosphere of nitrogen, whereby a cured cholesteric liquid crystal film 15 is obtained (Fig. 1(d)). There is thus produced a single-layer circularly-polarized-light-separating element 10 comprising the cholesteric liquid crystal film 15 laminated to the glass substrate 11 (Fig. 1(e)).